I. FACILITY INFORMATION

PSEG Fossil LLC, Burlington Generating Station, and Public Service Electric and Gas Company (PSE&G) Liquefied Natural Gas (LNG) Plant, and the PSE&G Burlington Substation (are collectively considered the "Facility"). The Burlington Generating Station is an electric generating plant owned and operated by PSEG Fossil LLC. The LNG plant is a part of the natural gas distribution system owned and operated by PSE&G. The Burlington Substation is a part of electric distribution and transmission system owned and operated by PSE&G. The Facility is located at 200 Devlin Avenue and West Broad Avenue, partially in Burlington City and partially in Burlington Township, NJ 08016.

The Facility is classified as a major facility based on its potential to emit 109 tons per year of Carbon Monoxide (CO), 152 tons per year of Nitrogen Oxides (NOx), 20.6 tons per year of Volatile Organic Compounds (VOC), 3.9 tons per year of Sulfur Dioxide (SO_2), 19.9 tons per year of Total Suspended Particulates (TSP), 20 tons per year of Particulate Matter less than 2.5 microns (PM2.5), 20 tons per year of Particulate Matter less than 10 microns (PM10), and 248,380 tons per year of Carbon Dioxide equivalent (CO2e) to the atmosphere.

This permit allows any individual HAP to be emitted at a rate to not exceed: 9.3 pounds per year of 1,3-butadiene; 4.68 pounds per year of 1-Methylnaphthalene; 0.01 pounds per year of 7,12-Dimethylbenz(a)anthracene; 104 pounds per year of Acetaldehyde, 22.0 pounds per year of Acrolein; 6.09 pounds per year of arsenic; 49.2 pounds per year of benzene; 0.17 pounds per year of beryllium; 3.16 pounds per year of Cadmium; 0.04 pounds per year of Cobalt; 83.2 pounds per year of Ethyl benzene; 1940.4 pounds per year of Formaldehyde; 8.37 pounds per year of Lead; 437.2 pounds per year of Manganese; 20.9 pounds per year of Naphthalene; 2.47 pounds per year of Nickel; 25.09 pounds per year of Polycyclic aromatic hydrocarbons; 25.09 pounds per year of Polycyclic organic matter; 75.4 pounds per year of Propylene oxide; and 0.0007 pounds per year of Dioxin & furans, and 0.54 tons per year of HAPS (Total) from insignificant sources at Section A Table 2

VOC emissions are being corrected to include formaldehyde emissions previously not accounted for. This emission increase is meant to capture emissions already present and no new actual emissions are being generated. As a result, the Department is not revisiting the applicability of State of The Art (N.J.A.C. 7:27-22.35) and Federal New Source Review (40 CFR 52.21-PSD and N.J.A.C. 7:27-18).

II. AREA ATTAINMENT CLASSIFICATION

The Federal Clean Air Act (CAA) sets National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are particulate matter, ground-level ozone, carbon monoxide (CO), sulfur dioxide (SO2), nitrogen dioxide (NO2), and lead. The US Environmental Protection Agency (USEPA) also classifies areas as "attainment" or "nonattainment" for each criteria pollutant, based on the magnitude of an area's problem. Nonattainment classifications are used to specify what air pollution reduction measures an area must adopt, and when the area must reach attainment. Currently, the entire State of New Jersey is designated as nonattainment for the 8-hour ozone NAAQS. New Jersey is designated attainment for all other pollutants. For nonattainment classification refer to https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information.

III. BACKGROUND AND HISTORY

The equipment that emits air contaminants from this facility include: Four (4) General Electric (GE) LM6000 simple-cycle combustion turbine modules each with a power output of forty five (45) megawatts (MW), two (2) hot water heaters; two (2) emergency generators; one (1) black start emergency generator; and two (2) fire pumps. The four LM6000 simple-cycle combustion modules have water injection for NOx emissions control and operate on natural gas as well as ultra-low sulfur distillate oil (ULSD) as fuel.

Table 1 - Operating Permit Revision History (located at the end of this document) provides a summary of all the changes that have been incorporated into the operating permit through seven-day notice changes, administrative amendments, minor modifications, or significant modifications since the approval of the initial operating permit or the most recent renewal thereof. Please refer to the attached explanation sheet for the structure and configuration of conditions of approval, included in the Facility Specific Requirements section of this permit.

A Facility-Wide Risk Assessment was conducted as part of the review of this permit application and health risk was determined to be negligible consistent with NJDEP Technical Manual 1003.

This is a Permit Renewal and includes the following changes:

1. Reduction of the emissions from insignificant combustion sources, to reflect the current inventory of these insignificant sources at the facility.
2. Reduction of sulfur dioxide emissions due to removal of the references to use low sulfur distillate oil as the facility no longer uses this oil and instead uses ULSD only.
3. Removal of outdated N.J.A.C. Subchapter 19 RACT requirements that are no longer applicable.
4. Inclusion of HAPs above the new lower revised reporting thresholds in N.J.A.C. 7:27-17.
5. Inclusion of a significant modification to the Title V Permit to install and operate one (1) new natural gas fired Hot Water Heater at PSE&G's Burlington Liquefied Natural Gas ("LNG") Plant. The new Hot Water Heater has a heat input capacity of approximately 33.3 MMBtu/hr.

This renewal will also change the allowable emission limits as listed in the following table:

Allowable Emission Limits	Facility's Potential Emissions (tons per year)*									
	VOC (total)	NO_x	CO	SO_2	TSP (total)	PM_{10} (total)	$PM_{2.5}$ (total)	Pb	HAPs (total)	CO_2e (total)
Current Permit	108	241	1132	24	25.5	25.6	25.6	NA	NA	231,440
Proposed Permit	20.6	152	109	3.9	19.9	20	20	NA	NA	248,380
Change (+ / -)	-87.7	-89	-1023	-20.1	-5.7	-5.6	-5.6	NA	NA	16,940

VOC	Volatile Organic Compounds	PM_{10}	Particulates under 10 microns
NO_x	Nitrogen Oxides	$PM_{2.5}$	Particulates under 2.5 microns
CO	Carbon Monoxide	Pb	Lead
SO_2	Sulfur Dioxide	HAPs	Hazardous Air Pollutants
TSP	Total Suspended Particulates	CO_2 e	Carbon Dioxide equivalent
* Other	Any other air contaminant regulated under the Federal Clean Air Act.		

This modification will add methane emissions of 2.92 tons per year and Nitrous emissions of 0.33 tons per year.

IV. CASE-BY-CASE DETERMINATIONS

No case-by-case determinations were required for this permit action.

V. EMISSION OFFSET REQUIREMENTS

This permit action is not subject to Emission Offset requirements.

VI. BASIS FOR MONITORING AND RECORDKEEPING REQUIREMENTS

The facility's operating permit includes monitoring, recordkeeping and reporting requirements that are sufficient to demonstrate the facility's continued compliance with the applicable requirements consistent with the following:

1. Provisions to implement the testing and monitoring requirements of N.J.A.C. 7:27-22.18, the recordkeeping and reporting requirements of N.J.A.C. 7:27-22.19, and all emissions monitoring and analysis procedures or compliance assurance methods required under the applicable requirements, including any procedures and methods promulgated pursuant to 40 CFR 64; and

2. Where the applicable requirement does not require direct periodic monitoring of emissions, the Department requires periodic monitoring of surrogate parameters sufficient to yield reliable data from the relevant time period that are representative of the facility's compliance with the permit.

   Combustion Turbines:
   For combustion turbines at U15 the facility monitors hours of operation, heat input, and fuel use as surrogates for the short term and long-term (TPY) emission limits for HAPs.

   The facility monitors fuel use and hours of operation, as surrogates for short-term (lb/hr) emission limits for SO_2, TSP, PM_{10}, $PM_{2.5}$ when combusting natural gas.

   The facility monitors fuel use and hours of operation, as surrogates for long-term (TPY) emission limits for VOC, NOx, CO, SO_2, TSP, PM_{10}, $PM_{2.5}$, and Greenhouse gases as CO2e.

   Emergency Generators
   For emergency generator at U2, fire pump at U3, and black start generator at U6 the facility monitors hours of operation as the surrogate for the long-term (TPY) and short-term (lb/hr) emission limits for VOC, NOx, CO, SO_2, TSP, PM_{10} and $PM_{2.5}$. Surrogate monitoring for the short-term (lb/hr) emission limits for SO_2 is fuel oil sulfur content for SO_2.

   Hot Water Heaters
   For hot water heaters at U18 the facility monitors natural gas usage as the surrogate for the long-term (TPY), and heat input as surrogate for short-term (lb/hr) emission limits for VOC, NOx, CO, SO_2, TSP, PM_{10}, $PM_{2.5}$ and HAPs.

3. In some cases, direct periodic monitoring of emissions and/or surrogate parameters is not required due to one or more of the following:

   - Equipment size and capacity limitations,
   - Subject equipment being permitted at the maximum rated capacity,
   - There is no specific state or Federal standard that applies to this piece of equipment,
   - Not a pollutant of concern for this piece of equipment,
   - Agreements with EPA on the frequency of testing and monitoring for combustion sources.

VII. APPLICABLE STATE AND FEDERAL RULES

The facility is subject to New Jersey Air Pollution Control Regulations, codified in N.J.A.C. 7:27-1 through 34, as applicable. A complete text of these regulations is available at:
http://www.nj.gov/dep/aqm/rules27.html

The facility is subject to Federal regulations listed below.

- NSPS Subpart A: New Source Performance Standards - General Provisions
- NSPS Subpart Dc: New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units
- NSPS Subpart KKKK: New Source Performance Standards for Stationary Gas Turbines
- 40 CFR 72 Acid Rain Program
- 40CFR 97 Cross-State Air Pollution Rule (CSAPR)
- NSPS Subpart IIII New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines

The Greenhouse Gas (GHG) emissions from this facility are 248,380 TPY CO2e and the GHG emissions increase are 16,940 TPY CO2e. This renewal and modification are not subject to PSD rules at 40 CFR 52.21.

VIII. FACILITY'S COMPLIANCE STATUS

The Responsible Official at the facility has certified that the facility currently meets all applicable requirements of the Federal Clean Air Act and the New Jersey Air Pollution Control Act. Based on this certification, the Department's evaluation of the information included in the facility's application, and a review of the facility's compliance status, the Department has concluded that this air pollution control operating permit should be approved.

The facility has submitted a timely and complete application to renew their operating permit and an application shield is in effect.

This operating permit includes a permit shield, pursuant to the provisions of N.J.A.C. 7:27-22.17. A permit shield provides that compliance with the relevant conditions of the operating permit shall be deemed compliance with the specific applicable requirements that are in effect on the date of issuance of the draft operating permit, and which form the basis for the conditions in the operating permit.

Also, prior to the expiration of the five-year period, the facility will be required to apply for a renewal of this operating permit, at which time the Department will evaluate the facility and issue a public notice with its findings.

IX. EXEMPT ACTIVITIES

The facility's operating permit does not include exempt activities such as office and interior maintenance activities, maintenance shop activities, food preparation facilities, cafeterias and dining rooms, etc. A complete list of exempt activities, as allowed by the Operating Permit rule, can be found at N.J.A.C. 7:27-22.1.

Table 1 - Operating Permit Revision History

PSEG FOSSIL LLC BURLINGTON GENERATING STATION PI 45979

Permit Activity Number	Type of Revision	Description of Revision	Final Action Date
BOP190003	Minor Modification	This application is to add Regional Greenhouse Gas Initiative requirements for their four combustion turbines to the permit pursuant to N.J.A.C. 7:27C.	1/20/2020
BOP190002	Administrative Amendment	This Title V administrative amendment application is to reflect a change in the Power Plant Manager at PSEG Fossil's Burlington Generating Station (Burlington). Mr. Clint Bogan is the new Power Plant Manager and Responsible Official at the facility, replacing Mr. Hector Bustamante	9/4/2019
BOP190001	Administrative Amendment	This Title V administrative amendment application is to reflect a change in the Power Plant Manager at Burlington. Mr. Hector Bustamante is the new Power Plant Manager and Responsible Official at the facility, replacing Mr. Peter Van Den Houten.	4/23/2019
BOP160001	Administrative Amendment	This Title V administrative amendment application is to reflect a change in the Power Plant Manager at Burlington. Mr. Peter Van Den Houten is the new Power Plant Manager and Responsible Official at the facility.	10/24/2016
BOP150003	Administrative Amendment	This Title V administrative amendment application is to reflect the permanent retirement and removal of the FT4 combustion turbines under emission units U4, U5, and U7. The combustion turbines were placed into permanent retirement on May 1, 2015. Please see submittal package for additional information.	3/14/2016
BOP150002	Significant Modification	This application is to install and operate a new natural gas-fired Emergency Generator. The emergency generator will be located at the Burlington Liquefied Natural Gas (LNG) Plant, which is a PSE&G site. Since the Burlington LNG Plant is contiguous/adjacent to PSEG Fossil's Burlington Generating Station, it is being added to Burlington's approved Title V Operating Permit (BOP130002). The proposed new emergency generator will provide emergency power to the Burlington LNG Plant during periods of power loss, as well as for normal testing and maintenance purposes. The emergency generator is a Cummins "NPower" Model GTA50 with a rated output of 819 kilowatts (kW), 1098 horsepower (hp), and a maximum heat input of 10.42 million British Thermal Units per hour (MMBtu/hr).	1/5/2016
BOP150001	Significant Modification	This minor permit modification application is for the ability to exchange LM6000 turbines between Burlington Unit No. 12 (U15), Kearny Generating Station (Kearny) Unit No. 12 (U14), and Kearny Units No. 13 and 14 (U13). Kearny's Program Interest Number is 12200. Please see the application package for additional details.	12/22/2015

Explanation Sheet for Facility Specific Requirements

FACILITY NAME (FACILITY ID NUMBER)
BOP050001

Activity Number assigned by the Department

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit Number assigned by the Facility

Brief description of emission unit

Emission Unit: **U40 Sewage Sludge Incinerators**
Operating Scenario: **OS Summary** **OR** **OS2 Fluidized Bed Incinerator**

OS Summary lists all rules and requirements that apply to an emission unit. An emission unit may contain one or more pieces of equipment and corresponding operating scenarios.

OSX denotes the operating scenario number and lists the rules and requirements that apply to a scenario. An operating scenario represents various ways (or scenarios) a piece of equipment is permitted to operate.

Item Number

Description of applicable requirement

Monitoring method to ensure compliance

Recordkeeping to show facility's compliance

Actions and submittals required for the facility

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	The permittee shall conduct an annual performance test for each pollutant in Table 2 of 40CFR62 Subpart LLL between 11 and 13 calendar months after the previous performance test or within 60 days of a process change. [40 CFR 62.16000(a)]	Other: Conduct the performance test using the test methods, averaging methods and minimum sampling volumes or durations as specified in 40CFR62 Subpart LLL and according to the testing, monitoring and calibration requirements specified in 40 CFR 62.16015(a). [40 CFR 62.16000(a)].	Other: (1) Maintain records of the results of initial, annual and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable. [40 CFR 62.16025(e)].	Submit a report: Annually to the Administrator and to the Department. The permittee shall submit an annual compliance report as specified in 40 CFR 62. [40 CFR 62.16000(d)]

Rule citation for applicable requirement

Rule citation for monitoring requirement

Rule citation for recordkeeping requirement

Rule citation for submittal/ action requirement